

Serial No. 10/674668

Attorney Docket No. 20T-022-CON

LISTING OF CLAIMS:

The present listing of claims replaces all previous version and listings in the present application.

Please cancel claims 17, 21, 23, 25 and 27-37.

1.-15. (Canceled)

16. (Currently amended) A satellite-based method for rapidly altering the size of a communication cell in response to bandwidth demands, said method including:

transmitting a plurality of radio frequency (RF) beams from a satellite-based transmitter to establish a corresponding plurality of communication cells, each of the plurality of communication cells having an assignable set of communication slots capable of servicing a plurality of users in a coverage area during a frame time interval, the plurality of users including first users having a high demand and second users having a low demand, the first users assigned a first group of the assignable set of communication slots and the second users assigned a second group of the assignable set of communication slots;

determining establishing a first size for a first communication cell associated with one of the plurality of RF beams based on a first bandwidth demand associated with the first users;

determining a second size for said first communication cell associated with the one of the plurality of RF beams based on a second bandwidth demand associated with the second users;

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~~determining a bandwidth demand for at least one communication cell adjacent to said first communication cell and only for said at least one communication cell adjacent to said first communication cell; and~~

rapidly altering the size of said first communication cell from said first size to said second size based at least in part on said bandwidth demand during the second group of the assignable set of communication slots and from said second size to said first size during the first group of the assignable set of communication slots, by adjusting one or more beam forming parameters associated with the one of the plurality of RF beams.

17. (Canceled)

18. (Currently amended) The satellite-based method of claim 16, wherein a terminal in a communication cell adjacent to said first communication cell makes a bandwidth request,

wherein said bandwidth request has a priority level,

wherein said step of altering said size of said first communication cell is based in part on said priority level.

19. (Currently amended) The satellite-based method of claim 16, wherein said second size of said first communication cell overlaps on at least one communication cell adjacent to said first communication cell.

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20. (Currently amended) A satellite-based method for rapidly altering the size of a communication cell in response to bandwidth demands, the communication cell having an assignable set of communication slots capable of servicing a plurality of users in a coverage area during a frame time interval, the plurality of users including first users having a high demand and second users having a low demand, the first users assigned a first group of the assignable set of communication slots and the second users assigned a second group of the assignable set of communication slots, said method including:

~~determining a service area including a plurality of communication cells;~~ determining a first size for ~~a first~~ the communication cell based on the high demand associated with the first users in said service area;

determining a second size for ~~said first~~ the communication cell based on the high demand of the first users and the low demand of the second users in said service area;

~~determining a bandwidth demand for at least one communication cell adjacent to said first~~